

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. Receipt is acknowledged of a request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e) and a submission (amendment), filed on March 27, 2008. The request has been deemed proper and this application has been hereby examined in view of said amendment.

### ***Election/Restrictions***

2. Claims 7 and 11-38 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim, in accordance with the Restriction Requirement in item 1 of the Office Action of July 3, 2006. This restriction was made final in the previous office action.

### ***Response to RCE Amendment***

3. The 35 U.S.C. §102 rejection of claims 1-6 and 8-10 as anticipated by PCT Application Publication Number WO 03/056130 A1 to Couillet et al., hereinafter 'Couillet', previously set forth in item 8 on page 4 of the Final Office Action of January 23, 2007 (FOA) has been withdrawn.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1-6 and 8-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Independent claim 1 recites the limitation "during the drilling phase" in the preamble and in line 7. There is insufficient antecedent basis for this limitation in the claim. Moreover, it is unclear from the claim language as to what type of process "the drilling phase" is referring to: an oil field drilling using a drilling bit, completion, cementing, fracturing, etc.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-6 and 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Application Publication No. 2003/0013871 A1 to Mallon et al., hereinafter 'Mallon'.

Mallon discloses preparing a modified cellulose/polysaccharide ether by subjecting the cellulose ether sodium salt to electrodialysis and reacting with a base or

salt to form a product that has few impurities and is thereby low polluting; wherein the base or salt can be, e.g., a chloride of up to three carbons; and wherein the polysaccharide starting material can be chitosan or chitin. (Page 1, [0004] to [0008] and [0018]; page 2, [0024]; page 4, [0060]) The molecular weight of the for the polysaccharide is between 10,000 and 2 million grams/mol (page 4, [0061]) and a particular derivatizing agent for modifying the polysaccharide are alkyl halides, such as ethyl chloride or methyl chloride (page 4, [0062]).

Mallon further discloses that a typical industrial application for the polysaccharide ether is in oil field drilling and fracturing processes, wherein the modified polysaccharide can serve as a viscosity adjuster or suspension aid (page 6, [0076]) and wherein said polysaccharide can be present in a composition from about 0.05 to 3% by weight (page 6, [0080]). Accordingly, because Mallon is disclosing adding to a drilling process in a subterranean formation the same compound (alkylated chitosan) as the elected species for the hydrophobically-modified polymer recited in the claims (which would, of course, inherently have the same physical properties), Mallon is thereby disclosing a method of drilling in a subterranean formation by adding an RPM polymer compound in accordance with the instant claims with sufficient specificity.

Although Mallon may not explicitly disclose "allowing" the relative permeability modifier to "attach" onto the surface, because Mallon discloses treating a formation with the same relative permeability modifier (RPM) polymer compound as encompassed by the instant claims (which would possess the same physical properties/effects), then the method of drilling disclosed in Mallon must inherently "allow" the RPM polymer

compound to "attach" to a portion of the surface of the subterranean formation" upon the addition of said RPM polymer compound in Mallon's method of drilling in a formation.

Thus, the instant claims are anticipated by Mallon.

#### ***Response to Arguments***

##### **The 35 U.S.C. §102 Rejection over Couillet (item 2 of FOA)**

7. Applicant's arguments in Response with respect to the 35 U.S.C. 102(e) rejection of claims 1-6 and 8-10 as anticipated by Couillet have been considered but deemed moot in view of the withdrawal of this rejection due to Couillet not teaching the chitosan compound used in a drilling phase as recited in the claims. However, if Applicant removes this limitation from the claims in an effort to overcome the 35 U.S.C. 112, second paragraph rejection presented above, then the instant rejection would be reinstated.

#### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Particularly, the USPN 7,081,439 B2 to Sullivan is deemed cumulative. USPN 4,814,096 A to Evani and USPN 7,091159 B2 to Eoff are relevant but are not drawn to the elected species and also deemed cumulative.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Figueroa whose telephone number is (571) 272-8916. The examiner can normally be reached on Monday-Thursday 8:00-6:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JJF/RAG

/Randy Gulakowski/  
Supervisory Patent Examiner, Art Unit 1796